



CALSTEST NETWORK

AFCTN Test Report 93-057

AFCTB-ID
92-044



Technical Publication Transfer

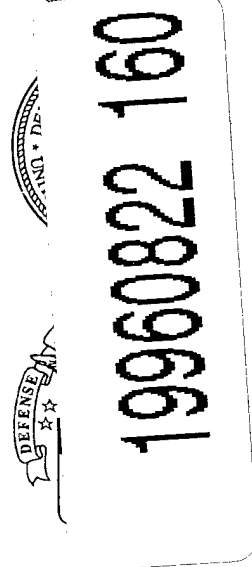
Using:



Foreign Broadcast Information
Service's Data

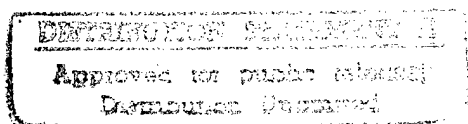


MIL-M-28001A (SGML)
MIL-R-28002A (Raster)



Quick Short Test Report

12 August 1992

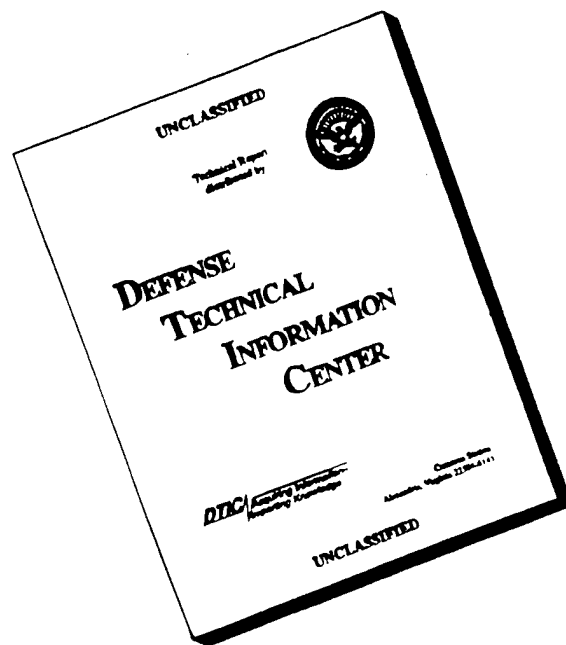


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AFCTN Test Report
93-057

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Technical Publication Transfer
Using:
Foreign Broadcast Information Service's Data

MIL-M-28001A (SGML)
MIL-R-28002A (Raster)

Quick Short Test Report

12 August 1992

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1. Introduction

1.1 Background

The Department of Defense (DoD) Air Force Continuous Acquisition and Life-Cycle Support (CALS) Test Network (AFCTN) is conducting tests of the military and standard for the Automated Interchange of Technical Information, MIL-STD-1840A, and its companion suite of military specifications. The AFCTN is a DoD sponsored confederation of voluntary participants from industry and government managed by the Electronic Systems Center (ESC).

The primary objective of the AFCTN is to evaluate the effectiveness of the CALS standards for technical data interchange and to demonstrate the technical capabilities and operational suitability of those standards. Two general categories of tests are performed to evaluate the standards; formal and informal.

Formal tests are large and comprehensive, which follow a written test plan, require specific authorization from the DoD, and may take months to prepare, execute, and report.

Informal tests are quick and short, used by the AFCTN technical staff, to broaden the testing base. They include representative samples of the many systems and applications used by AFCTN participants. They also allow the AFCTN staff to gain feedback from many industry and government interpretations of the standards, to increase the base of participation in the CALS initiative, and respond to the many requests for help that come from participants. Participants take part voluntarily, benefit by receiving an evaluation of their latest implementation (interpretation) of the standards, interact with the AFCTN technical staff, gain experience using the standards, and develop increased confidence in them. The results of informal tests are reported in Quick Short Test Reports (QSTRs) that briefly summarize the standard(s) tested, the hardware and software used, the nature of the test, and the results.

1.2 Purpose

The purpose of the informal test, reported in this QSTR, was to analyze Foreign Broadcast Information Service's (FBIS) interpretation and use of the CALS standards in transferring technical publication data. FBIS used its CALS Technical Data Interchange System to produce data, in accordance with the standards, and delivered it to the AFCTN technical staff on a 9-track magnetic tape.

2. Test Parameters

Test Plan: AFCTB 92-044

Date of
Evaluation: 12 August 1992

Evaluators: George Elwood
Air Force CALS Test Bed
DET 2 HQ ESC/ENCP
Suite 300
4027 Colonel Glenn Hwy
Dayton OH 45431-1672

Data
Originator: Foreign Broadcast Information Service
Thomas Tamaccio
P.O. Box 2604
Washington DC 20013

Data
Description: Technical Manual Test
5 Document Declaration files
5 Text files
47 Raster files

Data
Source System:

Text/Standard Generalized Markup Language (SGML)

HARDWARE

Unknown

SOFTWARE

XSoft CAPS/CALS

Raster

HARDWARE

Unknown

SOFTWARE

XSoft CAPS/CALS

Evaluation Tools Used:

MIL-STD-1840A (TAPE)

SUN 3/280

AFCTN Tapetool v1.2.8 UNIX

XSoft CAPS/CALS v40.4

Cheetah Gold 486

USLynx 1840A Tape Handler

AFCTN Tapetool v1.2.8 DOS

MIL-M-28001 (SGML)

SUN SparcStation 2

XSoft CAPS v6.0x

ArborText ADEPT v4.2.1

SoftQuad Author/Editor v2.1

Cheetah Gold 486

Exoterica XGMLNormalizer v1.2e3.2

MIL-R-28002 (Raster)

SUN SparcStation 2

ArborText g42tiff

XSoft CAPS ccitt2caps v6.0x

AFCTN validg4

AFCTN calstb.475

Island Graphics IslandPaint v3.0

Rosetta Technologies Preview v3.2

SUN 3/60

AFCTN validg4

AFCTN calstb.350

XSoft CAPS v4.0

Rosetta Technology Preview v3.1

Cheetah

Inset Systems HiJaak v2.02

Software Publishing Corporation

(SPC) Harvard Graphics v3.0

Corel Ventura Publisher

Standards

Tested:

MIL-STD-1840A

MIL-M-28001A

MIL-R-28002A

3. 1840A Analysis

3.1 External Packaging

The tape arrived at the Air Force CALS Test Bed (AFCTB) enclosed in a box in accordance with ASTM D 3951. The exterior of the box was not marked with the magnetic tape warning label, as required by MIL-STD-1840A, para. 5.3.1.3.

The tape was not enclosed in a barrier bag or barrier sheet material, as required by MIL-STD-1840A, para. 5.3.1.2. Inspection of the tape reel showed a lack of the label indicating the recording density, as required by MIL-STD-1840A, para. 5.3.1. Some 9-track tape units require this BPI to be set manually. Enclosed in the box was a packing list showing all files recorded on the tape.

3.2 Transmission Envelope

The 9-track tape received by the AFCTB contained MIL-STD-1840A files. The files were named per the standard conventions.

3.2.1 Tape Formats

The tape was run through the AFCTN *Tapetool* v1.2.8 utility, on the Sun 3/280 UNIX based system. The files were read off the tape but when the evaluation started a core dump resulted. Only three files in document D001 were evaluated. This version of *Tapetool* appears to have a bug which will be tracked and corrected.

On the PC based version of the AFCTN *Tapetool* v1.2.8, a complete evaluation was completed. 56 errors and 25 notes were reported while evaluating the contents of the tape labels. 13 were "Invalid record size encountered" errors. All of the errors are shown in Appendix A. It was noted that the text files were not correctly read off the tape. Only part of the header records were read off.

Some of the errors related to the tape label Record Length field for Type D files. Type D files contain variable

length records that do not span blocks. All of the Type D files written on the tape were flagged with an illegal value for Record Length. The D00X and D00XT0XX files were expected to be Type D according to MIL-STD-1840A. The AFCTN Tapetool software is expecting a value of 260 in the Record Length field but encountered a record length of 256. MIL-STD-1840A, para. 5.2.1.3 requires the variable record size be a maximum of 256 bytes. ANSI X3.27 para. 7.2.3 further states that the length of a Record Control Word (RCW) must be included in a Measured Data Unit (MDU) record length computation. This adds four bytes to the 256 for an MDU total of 260 bytes. ANSI X3.27 para. 8.5.2.6 states that the Record Length field for Type D files shall contain the maximum length of an MDU. While MIL-STD-1840A permits variable length records, some software programs are sensitive to the number 260 because it is used to limit the record size when unblocking data. Some systems need this value to declare the maximum allowable record size as an attribute of a file when it is created. Shown below is the error log for file D001.

D001 Document Declaration D/00256 02048/000001 Selected
*** NOTE (MIL-STD-1840A; 5.2.1.3) - Unexpected maximum variable record size encountered. Header => 256, Expected => 260
*** NOTE (ANSI X3.27; 8.5.2.6) - Record Length for Recording Format Type D shall be the maximum length of a Measured Data Unit (MDU).
*** NOTE (ANSI X3.27; 7.2.3) - A variable length record shall be contained in an MDU. An MDU consists of a four byte Record Control Word (RCW) followed immediately by the variable record.
*** NOTE (ANSI X3.4) - A Record Control Word shall consist of four characters that express the sum of the lengths of the RCW and the variable record.

A note was reported on the tape label version. MIL-STD-1840A permits the use of both version three and four. The use of the most current standard should be used and noted.

Label Standard Version: 3

*** NOTE (ANSI X3.27; 8.3.1.8) - The Label Standard Version should be 4 to represent the current level of ANSI X3.27.

A critical error was reported by Tapetool. This AFCTN utility reported an I/O error with the RCW. The result of

this error was data for the "D" type records, the text files and the Declaration file, were missing. This error was reported for all D00X and D00XT0XX files.

*** I/O ERROR - Invalid Record Control Word encountered.
Record Control Word contained an invalid record length.
Record Control Word string =>
*** NOTE - Remainder of file will be skipped.

The next error was reported for all files after the first one. The file sequence number should have been incremented by one for each new file. All files on this tape had a sequence number of 1.

File Identifier: D002

File Sequence Number: 0001

*** ERROR (ANSI X3.27; 6.5.2) - Invalid file sequence number.
File sequence numbers should increase by 1 for each file.
Previous = 1; Expected = 2; Actual = 1

The tape was also read using XSoft's *read1840A* utility. No errors were reported and the entire tape and files were read off the tape.

The tape was finally read using USLynx *calstape* on the PC platform. All of the files were read off the tape and appeared to be complete. No error messages were generated. It was noted that all text files started with many blank lines before the actual text. This has not been noted before using this software.

3.2.2 Declaration and Header Fields

The Document Declaration file reported no error during the parsing operation. All files in the document then reported the same errors and notes. As shown below for file D001T001, the *srcdocid* and the *dstdocid* record was different than that defined in the *srcdocid* and *dstdocid* in Declaration file. This resulted in two errors and two notes for every file in each document.

Found file: D001

srcdocid: tst-074
dstdocid: tst-074

Found file: D001T001

srcdocid: tst-078
*** ERROR (MIL-STD-1840A; 5.1.4.1) - Invalid value for 'srcdocid:'.
Expected => srcdocid: tst-074
*** NOTE - Correction made in new Text Header File.
dstdocid: tst-078
*** ERROR (MIL-STD-1840A; 5.1.4.1) - Invalid value for 'dstdocid:'.
Expected => dstdocid: tst-074
*** NOTE - Correction made in new Text Header File.
txtfilid: W
doccls: Unclassified
notes: NONE

An additional error was reported for all Raster files. The txtfilid record must contain the value in record three of the text file. The value is define in MIL-STD-1840A, para. 5.1.4.4, Table II. This value should have been "W".

txtfilid: tst-075
*** ERROR (MIL-STD-1840A; 5.1.4.4) TABLE II - Invalid value for 'txtfilid:'.
*** NOTE (MIL-STD-1840A; 5.1.4.4) TABLE II - The value for 'txtfilid:' should be 'W' when there is only one text file.
*** NOTE - The header record will be given the value W.
*** NOTE - Correction made in new Raster Header File.

4. IGES Analysis

No IGES files were included on the tape.

5. SGML Analysis

The text files removed using the AFCTN *Tapetool* utility were not complete files and could not be used for an evaluation.

The text files removed using the XSoft *read1840A* utility were used for this evaluation. It was noted that no DTD was referenced by the text files. When visually inspecting the files, it appeared that a non 38784 based DTD was used. Many of the tags indicated FOSI type information.

6. Raster Analysis

All Raster images were checked using the AFCTN *validg4* utility. This utility reported that all files were valid CALS Raster images.

A selection of the Raster files were converted using Rosetta Technologies' *Prepare*. No errors were reported. The selected files were displayed and printed.

A selection of the Raster files were converted using Arbor-Text's *Adept g42tiff*. No errors were reported during this process. The resulting files were then read into Island Graphics' *IslandPaint*, displayed and printed without a reported error.

The files were converted to an IMG format using Inset Systems' *HiJaak*. This was completed without a reported error. The files were then read into Corel's *Ventura Publisher* and printed. No problems were reported and the hard copy is included in the Appendix to this report.

The quality of the images were in some cases marginal. The cause of this was probably due to the quality of the original images.

7. CGM Analysis

No Computer Graphics Metafile (CGM) files were included on the tape.

8. Conclusions and Recommendations

In summary, the tape from the FBIS had some basic formatting errors. The tape could not be read properly using the AFCTN *Tapetool* utility. The reported errors resulted in the loss of data from the files. The physical structure of the tape does not meet the CALS MIL-STD-1840A requirements.

The text files were created with a nonstandard DTD. The text files appeared to have FOSI type tags included in the document. It appears as if the text files were not converted to a MIL-D-38784 type DTD before it was output. Without a DTD, it was not possible to evaluate the text file. These SGML files do not meet the CALS MIL-M-28001A specification.

All Raster files on the tape were valid files. The files could be converted, displayed, and printed using various software utilities available within the AFCTB. They meet the CALS MIL-R-28002A specification.

This tape does not meet the CALS MIL-STD-1840A requirements.

9. Appendix A - Tapetool Report Logs

9.1 Tape Catalog

Air Force CALS Test Network Catalog Evaluation - Version 1.2; Release Number 8

Standards referenced:

- MIL-STD-1840A (1987) - Automated Interchange of Technical Information
- ANSI X3.27 (1987) - File Structure and labeling of Magnetic Tapes
for Information Interchange
- ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Wed Aug 12 15:49:54 1992
MIL-STD-1840A File Catalog

File Set Directory: C:\TAPETOOL\SET011

Page: 1

File Name	File Type	Record Format/ Length	Block Length/Total	Selected/ Extracted
D001	Document Declaration	D/00256	02048/000001	Selected
*** NOTE (MIL-STD-1840A; 5.2.1.3) - Unexpected maximum variable record size encountered. Header => 256, Expected => 260				
*** NOTE (ANSI X3.27; 8.5.2.6) - Record Length for Recording Format Type D shall be the maximum length of a Measured Data Unit (MDU).				
*** NOTE (ANSI X3.27; 7.2.3) - A variable length record shall be contained in an MDU. An MDU consists of a four byte Record Control Word (RCW) followed immediately by the variable record.				
*** NOTE (ANSI X3.4) - A Record Control Word shall consist of four characters that express the sum of the lengths of the RCW and the variable record.				
D002	Document Declaration	D/00256	02048/000001	Selected
*** NOTE (MIL-STD-1840A; 5.2.1.3) - Unexpected maximum variable record size encountered. Header => 256, Expected => 260				

<<<<< PART OF LOG REMOVED HERE >>>>>

D002T001	Text	D/00256	02048/000009	
*** NOTE (MIL-STD-1840A; 5.2.1.4) - Unexpected maximum variable record size encountered. Header => 256, Expected => 260				

<<<<< PART OF LOG REMOVED HERE >>>>>

Catalog Process terminated with 0 error(s), 0 warning(s), and 13 note(s).

9.2 Tape Evaluation Log

Air Force CALS Test Network Tape Evaluation - Version 1.2; Release Number 8

Standards referenced:

ANSI X3.27 (1987) - File Structure and labeling of Magnetic Tapes
for Information Interchange

ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Wed Aug 12 15:43:03 1992

ANSI Tape Import Log

Rewinding tape to load point...

VOL1VOL001

XSoft CG

3

Label Identifier: VOL1
Volume Identifier: VOL001
Volume Accessibility:
Owner Identifier: XSoft CG
Label Standard Version: 3

*** NOTE (ANSI X3.27; 8.3.1.8) - The Label Standard Version
should be 4 to represent the current level of ANSI X3.27.

HDR1D001

00010001000100 92198 00000 000000

Label Identifier: HDR1
File Identifier: D001
File Set Identifier:
File Section Number: 0001
File Sequence Number: 0001
Generation Number: 0001
Generation Version Number: 00
Creation Date: 92198
Expiration Date: 00000
File Accessibility:
Block Count: 000000
Implementation Identifier:

HDR2D0204800256

00

Label Identifier: HDR2
Recording Format: D
Block Length: 02048
Record Length: 00256
Offset Length: 00

***** Tape Mark *****

Actual Block Size Found = 2048 Bytes.

*** I/O ERROR - Invalid Record Control Word encountered.
Record Control Word contained an invalid record length.
Record Control Word string =>
*** NOTE - Remainder of file will be skipped.

Number of data blocks read = 1.

***** Tape Mark *****

EOF1D001 00010001000100 92198 00000 000001

Label Identifier: EOF1
File Identifier: D001
File Set Identifier:
File Section Number: 0001
File Sequence Number: 0001
Generation Number: 0001
Generation Version Number: 00
Creation Date: 92198
Expiration Date: 00000
File Accessibility:
Block Count: 000001
Implementation Identifier:

EOF2D0204800256 00

Label Identifier: EOF2
Recording Format: D
Block Length: 02048
Record Length: 00256
Offset Length: 00

***** Tape Mark *****

HDR1D002 00010001000100 92198 00000 000000

Label Identifier: HDR1
File Identifier: D002
File Set Identifier:
File Section Number: 0001
File Sequence Number: 0001
Generation Number: 0001
Generation Version Number: 00

Creation Date: 92198
Expiration Date: 00000
File Accessibility:
Block Count: 000000
Implementation Identifier:

*** ERROR (ANSI X3.27; 6.5.2) - Invalid file sequence number.
File sequence numbers should increase by 1 for each file.
Previous = 1; Expected = 2; Actual = 1

HDR2D0204800256

00

Label Identifier: HDR2
Recording Format: D
Block Length: 02048
Record Length: 00256
Offset Length: 00

***** Tape Mark *****

Actual Block Size Found = 2048 Bytes.

*** I/O ERROR - Invalid Record Control Word encountered.
Record Control Word contained an invalid record length.
Record Control Word string =>
*** NOTE - Remainder of file will be skipped.

Number of data blocks read = 1.

***** Tape Mark *****

EOF1D002

00010001000100 92198 00000 000001

Label Identifier: EOF1
File Identifier: D002
File Set Identifier:
File Section Number: 0001
File Sequence Number: 0001
Generation Number: 0001
Generation Version Number: 00
Creation Date: 92198
Expiration Date: 00000
File Accessibility:
Block Count: 000001
Implementation Identifier:

EOF2D0204800256

00

Label Identifier: EOF2
Recording Format: D
Block Length: 02048
Record Length: 00256
Offset Length: 00

***** Tape Mark *****

<<<< PART OF LOG REMOVED HERE >>>>

***** Tape Mark *****

HDR1D001T001 00010001000100 92198 00000 000000

Label Identifier: HDR1
File Identifier: D001T001
File Set Identifier:
File Section Number: 0001
File Sequence Number: 0001
Generation Number: 0001
Generation Version Number: 00
Creation Date: 92198
Expiration Date: 00000
File Accessibility:
Block Count: 000000
Implementation Identifier:

*** ERROR (ANSI X3.27; 6.5.2) - Invalid file sequence number.
File sequence numbers should increase by 1 for each file.
Previous = 5; Expected = 6; Actual = 1

HDR2D0204800256 00

Label Identifier: HDR2
Recording Format: D
Block Length: 02048
Record Length: 00256
Offset Length: 00

***** Tape Mark *****

Actual Block Size Found = 2048 Bytes.

*** I/O ERROR - Invalid Record Control Word encountered.
Record Control Word contained an invalid record length.
Record Control Word string =>
*** NOTE - Remainder of file will be skipped.

HDR2F0204800128

00

Label Identifier: HDR2
Recording Format: F
Block Length: 02048
Record Length: 00128
Offset Length: 00

***** Tape Mark *****

Actual Block Size Found = 2048 Bytes.

Number of data blocks read = 3.

***** Tape Mark *****

EOF1D001R002

00010001000100 92198 00000 000003

Label Identifier: EOF1
File Identifier: D001R002
File Set Identifier:
File Section Number: 0001
File Sequence Number: 0001
Generation Number: 0001
Generation Version Number: 00
Creation Date: 92198
Expiration Date: 00000
File Accessibility:
Block Count: 000003
Implementation Identifier:

EOF2F0204800128

00

Label Identifier: EOF2
Recording Format: F
Block Length: 02048
Record Length: 00128
Offset Length: 00

***** Tape Mark *****

<<<< PART OF LOG REMOVED HERE >>>>

***** Tape Mark *****

HDR1D005R005

00010001000100 92198 00000 000000

Label Identifier: HDR1
File Identifier: D005R005
File Set Identifier:
File Section Number: 0001
File Sequence Number: 0001
Generation Number: 0001
Generation Version Number: 00
Creation Date: 92198
Expiration Date: 00000
File Accessibility:
Block Count: 000000
Implementation Identifier:

*** ERROR (ANSI X3.27; 6.5.2) - Invalid file sequence number.
File sequence numbers should increase by 1 for each file.
Previous = 55; Expected = 56; Actual = 1

HDR2F0204800128

00

Label Identifier: HDR2
Recording Format: F
Block Length: 02048
Record Length: 00128
Offset Length: 00

***** Tape Mark *****

Actual Block Size Found = 2048 Bytes.

Number of data blocks read = 5.

***** Tape Mark *****

EOF1D005R005

00010001000100 92198 00000 000005

Label Identifier: EOF1
File Identifier: D005R005
File Set Identifier:
File Section Number: 0001
File Sequence Number: 0001
Generation Number: 0001
Generation Version Number: 00
Creation Date: 92198
Expiration Date: 00000
File Accessibility:
Block Count: 000005
Implementation Identifier:

EOF2F0204800128

00

Label Identifier: EOF2
Recording Format: F
Block Length: 02048
Record Length: 00128
Offset Length: 00

***** Tape Mark *****

HDR1D005R006

00010001000100 92198 00000 000000

Label Identifier: HDR1
File Identifier: D005R006
File Set Identifier:
File Section Number: 0001
File Sequence Number: 0001
Generation Number: 0001
Generation Version Number: 00
Creation Date: 92198
Expiration Date: 00000
File Accessibility:
Block Count: 000000
Implementation Identifier:

*** ERROR (ANSI X3.27; 6.5.2) - Invalid file sequence number.
File sequence numbers should increase by 1 for each file.
Previous = 56; Expected = 57; Actual = 1

HDR2F0204800128

00

Label Identifier: HDR2
Recording Format: F
Block Length: 02048
Record Length: 00128
Offset Length: 00

***** Tape Mark *****

Actual Block Size Found = 2048 Bytes.

Number of data blocks read = 4.

***** Tape Mark *****

EOF1D005R006

00010001000100 92198 00000 000004

Label Identifier: EOF1

File Identifier: D005R006
File Set Identifier:
File Section Number: 0001
File Sequence Number: 0001
Generation Number: 0001
Generation Version Number: 00
Creation Date: 92198
Expiration Date: 00000
File Accessibility:
Block Count: 000004
Implementation Identifier:

EOF2F0204800128

00

Label Identifier: EOF2
Recording Format: F
Block Length: 02048
Record Length: 00128
Offset Length: 00

***** Tape Mark *****

***** Tape Mark *****

End of Volume VOL001

End Of Tape File Set

Rewinding tape to load point...

Tape Import Process terminated with 57 error(s), 0 warning(s),
and 10 note(s).

9.3 Tape File Set Validation Log

Air Force CALS Test Network File Set Evaluation - Version 1.2; Release Number 8
Standards referenced:

MIL-STD-1840A (1987) - Automated Interchange of Technical Information
MIL-R-28002 (1989) - Raster Graphics Representation In Binary
Format, Requirements For

Wed Aug 12 15:49:55 1992

MIL-STD-1840A File Set Evaluation Log

File Set: SET011

Found file: D001 Extracting Document Declaration Header Records...
Evaluating Document Declaration Header Records...

srcsys: FBIS
srcdocid: tst-074
srcrelid: NONE
chglvl: ORIGINAL
dteis: 19920717
dstsys: OSWR
dstdocid: tst-074
dstrelid: NONE
dtetrm: 19920717
dlvacc: NONE
filcnt: T1, R15
ttlcls: Unclassified
doccls: Unclassified
doctyp: Technical Publication
docttl: NONE

Found file: D001T001
Extracting Text Header Records...
Evaluating Text Header Records...

srcdocid: tst-078
*** ERROR (MIL-STD-1840A; 5.1.4.1) - Invalid value for 'srcdocid:'.
Expected => srcdocid: tst-074
*** NOTE - Correction made in new Text Header File.
dstdocid: tst-078
*** ERROR (MIL-STD-1840A; 5.1.4.1) - Invalid value for 'dstdocid:'.
Expected => dstdocid: tst-074
*** NOTE - Correction made in new Text Header File.
txtfilid: W

doccls: Unclassified
notes: NONE

2 error(s), 0 warning(s), and 2 note(s) were encountered
in Text File D001T001.

Found file: D001R002
Extracting Raster Header Records...
Evaluating Raster Header Records...

srcdocid: tst-078
*** ERROR (MIL-STD-1840A; 5.1.4.4) - Invalid value for 'srcdocid:'.
Expected => srcdocid: tst-074
*** NOTE - Correction made in new Raster Header File.
dstdocid: tst-078
*** ERROR (MIL-STD-1840A; 5.1.4.4) - Invalid value for 'dstdocid:'.
Expected => dstdocid: tst-074
*** NOTE - Correction made in new Raster Header File.
txtfilid: tst-074
*** ERROR (MIL-STD-1840A; 5.1.4.4) TABLE II - Invalid value for 'txtfilid:'.
*** NOTE (MIL-STD-1840A; 5.1.4.4) TABLE II - The value for 'txtfilid:' should
be 'W' when there is only one text file.
*** NOTE - The header record will be given the value W.
*** NOTE - Correction made in new Raster Header File.
figid: NONE
srcgph: 193a0201
doccls: Unclassified
rtype: 1
rorient: 000,270
rpelcnt: 000816,000714
rdensty: 0300
notes: NONE

3 error(s), 0 warning(s), and 5 note(s) were encountered
in Raster File D001R002.

Saving Raster Header File: D001R002.HDR
Saving Raster Data File: D001R002.GR4

<<<<< PART OF LOG REMOVED HERE >>>>>

Evaluating numbering scheme...
No errors were encountered during numbering scheme evaluation.
Numbering scheme evaluation complete.

Checking file count...
No errors were encountered during file count verification.
File Count verification complete.

A total of 47 error(s), 0 warning(s), and 77 note(s) were encountered in Document D001.

Found file: D002
srcsys: FBIS
srcdocid: tst-075
srcrelid: NONE
chglvl: ORIGINAL
dteisu: 19920717
dstsys: CSWR
dstdocid: tst-075
dstrelid: NONE
dtetrn: 19920717
dlvacc: NONE
filcnt: T1, R10
ttlcls: Unclassified
doccls: Unclassified
doctyp: Technical Publication
docttl: NONE

Found file: D002T001
Extracting Text Header Records...
Evaluating Text Header Records...

srcdocid: tst-078
*** ERROR (MIL-STD-1840A; 5.1.4.1) - Invalid value for 'srcdocid:'.
Expected => srcdocid: tst-075
*** NOTE - Correction made in new Text Header File.
dstdocid: tst-078
*** ERROR (MIL-STD-1840A; 5.1.4.1) - Invalid value for 'dstdocid:'.
Expected => dstdocid: tst-075
*** NOTE - Correction made in new Text Header File.
txtfilid: W
doccls: Unclassified
notes: NONE

2 error(s), 0 warning(s), and 2 note(s) were encountered
in Text File D002T001.

Saving Text Header File: D002T001.HDR
Saving Text Data File: D002T001.TXT

Found file: D002R002
Extracting Raster Header Records...
Evaluating Raster Header Records...

srcdocid: tst-078

*** ERROR (MIL-STD-1840A; 5.1.4.4) - Invalid value for 'srcdocid:'.
Expected => srcdocid: tst-075
*** NOTE - Correction made in new Raster Header File.
dstdocid: tst-078
*** ERROR (MIL-STD-1840A; 5.1.4.4) - Invalid value for 'dstdocid:'.
Expected => dstdocid: tst-075
*** NOTE - Correction made in new Raster Header File.
txtfilid: tst-075
*** ERROR (MIL-STD-1840A; 5.1.4.4) TABLE II - Invalid value for 'txtfilid:'.
*** NOTE (MIL-STD-1840A; 5.1.4.4) TABLE II - The value for 'txtfilid:' should
be 'W' when there is only one text file.
*** NOTE - The header record will be given the value W.
*** NOTE - Correction made in new Raster Header File.
figid: NONE
srcgph: 193b0101
doccls: Unclassified
rtype: 1
rorient: 000,270
rpelcnt: 000944,000300
rdensty: 0300
notes: NONE

3 error(s), 0 warning(s), and 5 note(s) were encountered
in Raster File D002R002.

<<<< PART OF LOG REMOVED HERE >>>>

Evaluating numbering scheme...
No errors were encountered during numbering scheme evaluation.
Numbering scheme evaluation complete.

Checking file count...
No errors were encountered during file count verification.
File Count verification complete.

A total of 5 error(s), 0 warning(s), and 15 note(s) were
encountered in Document D005.

A grand total of 139 error(s), 0 warning(s), and 233 note(s) were
encountered in this File Set.

MIL-STD-1840A File Set Evaluation Complete.

9.4 Other Tape Reading Logs

18 entries

1. 08/12/92 15:55:43 DOC007 header

srcsys: FBIS

srcdocid: tst-074

srcrelid: NONE

chglvl: ORIGINAL

dteisu: 19920717

dstsys: OSWR

dstdocid: tst-074

dstrelid: NONE

dtetrm: 19920717

dlvacc: NONE

filcnt: T1, R15

ttlcls: Unclassified

doccls: Unclassified

doctyp: Technical Publication

docttl: NONE

2. 08/12/92 15:55:50 D001 transferred as DCLRTION

3. 08/12/92 15:56:38 D001T001 transferred as TEXT

4. 08/12/92 15:56:45 D001R001 transferred as 193a0201

5. 08/12/92 15:56:53 D001R003 transferred as 193a0202

6. 08/12/92 15:57:00 D001R004 transferred as 193a0301

7. 08/12/92 15:57:07 D001R005 transferred as 193a0302

8. 08/12/92 15:57:14 D001R006 transferred as 193a0303

9. 08/12/92 15:57:22 D001R007 transferred as 193a0401

10. 08/12/92 15:57:29 D001R008 transferred as 193a0402

11. 08/12/92 15:57:36 D001R009 transferred as 193a0403

12. 08/12/92 15:57:44 D001R010 transferred as 193a0501

13. 08/12/92 15:57:51 D001R011 transferred as 193a0502

14. 08/12/92 15:57:58 D001R012 transferred as 193a0503

15. 08/12/92 15:58:06 D001R013 transferred as 193a0504

16. 08/12/92 15:58:13 D001R014 transferred as 193a0601

17. 08/12/92 15:58:20 D001R015 transferred as 193a0602

18. 08/12/92 15:58:28 D001R016 transferred as 193a0603

10. Appendix B - Detailed SGML Analysis

No DTD was included on this tape. The documents were generated using a nonstandard DTD which was not available within the AFCTB.

11.1 Ventura Publisher Output Set One

11.2 Ventura Publisher Output Set Two

D002R002 - D002R011

$$\begin{aligned} u_1 &= \sum U_{\omega} [q_1^{(n)}(t) \cos n\omega + q_2^{(n)}(t) \sin n\omega], \\ u_2 &= \sum U_{\omega} [q_1^{(n)}(t) \sin n\omega - q_2^{(n)}(t) \cos n\omega], \\ u_3 &= \sum U_{\omega} [q_1^{(n)}(t) \cos n\omega + q_2^{(n)}(t) \sin n\omega]. \end{aligned}$$

$$\begin{aligned} \frac{1}{2} \sum_{j=1}^N [(u_j u_{j+1} + u_j u_{j-1}) e^{i\theta_j} - (u_j u_{j+1} + u_j u_{j-1}) e^{-i\theta_j}] + \\ - \frac{1}{2} \sum_{j=1}^N [(u_j u_{j+1} + u_j u_{j-1}) e^{i\theta_j} - (u_j u_{j+1} + u_j u_{j-1}) e^{-i\theta_j}] + \\ \frac{1}{2} \sum_{j=1}^N [(u_j u_{j+1} + u_j u_{j-1}) e^{i\theta_j} - (u_j u_{j+1} + u_j u_{j-1}) e^{-i\theta_j}] + \\ - \frac{1}{2} \sum_{j=1}^N [(u_j u_{j+1} + u_j u_{j-1}) e^{i\theta_j} - (u_j u_{j+1} + u_j u_{j-1}) e^{-i\theta_j}]. \end{aligned} \quad (11)$$

$$m_j^{(2\pi)} \text{ and } c_j^{(2\pi)} \quad (i, j=1, 2)$$

$$\begin{aligned} \frac{d}{dt} \left(\frac{1}{2} \dot{\theta}^2 + \frac{1}{2} \dot{\phi}^2 + \frac{1}{2} \dot{\psi}^2 \right) = \frac{d}{dt} \left(\frac{1}{2} \dot{\theta}^2 + \frac{1}{2} \dot{\phi}^2 + \frac{1}{2} \dot{\psi}^2 \right) = \\ \frac{d}{dt} \left(\frac{1}{2} \dot{\theta}^2 + \frac{1}{2} \dot{\phi}^2 + \frac{1}{2} \dot{\psi}^2 \right) = \frac{d}{dt} \left(\frac{1}{2} \dot{\theta}^2 + \frac{1}{2} \dot{\phi}^2 + \frac{1}{2} \dot{\psi}^2 \right). \end{aligned}$$

$$f^2 = \lambda_1 \left[(x_1 + 2x_2 + \frac{x_3}{2}) e^t + (x_2 + 2x_3 + \frac{x_1}{2}) e^t \right] +$$

$$\begin{aligned} &= K_1 \left(x_1 + 2x_2 + \frac{x_3}{2} \right) e^t - K_2 \left(x_1 + 2x_2 + \frac{x_3}{2} \right) e^t + \\ &+ K_3 \left(x_1 + 2x_2 + \frac{x_3}{2} \right) e^t - K_4 \left(x_1 + 2x_2 + \frac{x_3}{2} \right) e^t + \\ &+ K_5 \left(x_1 + 2x_2 + \frac{x_3}{2} \right) e^t - K_6 \left(x_1 + 2x_2 + \frac{x_3}{2} \right) e^t + \\ &+ K_7 \left(x_1 + 2x_2 + \frac{x_3}{2} \right) e^t - K_8 \left(x_1 + 2x_2 + \frac{x_3}{2} \right) e^t + \\ &+ K_9 \left(x_1 + 2x_2 + \frac{x_3}{2} \right) e^t - K_{10} \left(x_1 + 2x_2 + \frac{x_3}{2} \right) e^t + \end{aligned}$$

$$1. \chi \approx \omega \quad (\omega \approx \sqrt{c/m}):$$

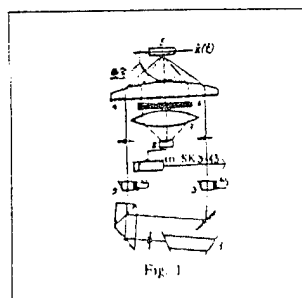
$$\begin{aligned} \Delta \mathcal{F}_{\text{tot}} = & \left[(C_1^2 - a^2 a_1^2) C_1 - a_1 a^2 K_{11} \right] C_1 + \\ & + \left[(C_2^2 - a^2 a_2^2) C_2 - a_2 a^2 K_{22} \right] C_2 + \\ & + \left[(C_3^2 - a^2 a_3^2) C_3 - a_3 a^2 K_{33} \right] C_3 + \\ & + \left[(C_4^2 - a^2 a_4^2) C_4 - a_4 a^2 K_{44} \right] C_4 + \\ & + \left[(C_5^2 - a^2 a_5^2) C_5 - a_5 a^2 K_{55} \right] C_5 + \\ & + \left[(C_6^2 - a^2 a_6^2) C_6 - a_6 a^2 K_{66} \right] C_6 + \\ & + \left[(C_7^2 - a^2 a_7^2) C_7 - a_7 a^2 K_{77} \right] C_7 + \\ & + \left[(C_8^2 - a^2 a_8^2) C_8 - a_8 a^2 K_{88} \right] C_8 + \\ & + \left[(C_9^2 - a^2 a_9^2) C_9 - a_9 a^2 K_{99} \right] C_9 + \\ & + \left[(C_{10}^2 - a^2 a_{10}^2) C_{10} - a_{10} a^2 K_{10,10} \right] C_{10} + \end{aligned}$$

$$\Delta \mathcal{F}_{\text{tot}} = - \left(K_{12} \eta_{12} + \frac{1}{2} \eta_{12} \right) (2m\omega)^{-1}.$$

$$\begin{aligned} \Delta \mathcal{F}_{\text{tot}} = & \left[(C_1^2 - a^2 a_1^2) C_1 - a_1 a^2 K_{11} \right] C_1 + \\ & + \left[(C_2^2 - a^2 a_2^2) C_2 - a_2 a^2 K_{22} \right] C_2 + \\ & + \left[(C_3^2 - a^2 a_3^2) C_3 - a_3 a^2 K_{33} \right] C_3 + \\ & + \left[(C_4^2 - a^2 a_4^2) C_4 - a_4 a^2 K_{44} \right] C_4 + \\ & + \left[(C_5^2 - a^2 a_5^2) C_5 - a_5 a^2 K_{55} \right] C_5 + \\ & + \left[(C_6^2 - a^2 a_6^2) C_6 - a_6 a^2 K_{66} \right] C_6 + \\ & + \left[(C_7^2 - a^2 a_7^2) C_7 - a_7 a^2 K_{77} \right] C_7 + \\ & + \left[(C_8^2 - a^2 a_8^2) C_8 - a_8 a^2 K_{88} \right] C_8 + \\ & + \left[(C_9^2 - a^2 a_9^2) C_9 - a_9 a^2 K_{99} \right] C_9 + \\ & + \left[(C_{10}^2 - a^2 a_{10}^2) C_{10} - a_{10} a^2 K_{10,10} \right] C_{10} + \end{aligned} \quad (12)$$

11.3 Ventura Publisher Output Set Three

ТЕОРИЯ - ТЕОРИЯ



Для (1) и (2) в качестве [1] метода левостороннего сигнала своей технической метрологической обес-
печенности частоты до-
полнительного [2] си-
стемного средства
обработки требует
использования ЛДВ, поскольку
есть возможность работы
с частотой. Простейшим с
точки зрения акустиче-
ского зондирования
является облучение
объекта (10 МГц) резонансной
выпускаемых акустиче-
ских [4]. На рис. 1

$$E(x, t) = A_1 \exp[-(i\omega_1 - kx)] \quad (1)$$

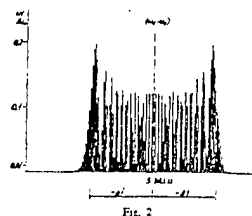
$$\begin{aligned} E_1' &= E_1' \exp\{-i[(\omega_1 + \omega_2)t - kx]\}, \\ E_2' &= E_2' \exp\{-i[(\omega_1 + \omega_2)t - kx - \Phi]\}. \end{aligned}$$

$$\begin{aligned} E_1' &= E_1' \exp\{-i[(\omega_1 + \omega_2)t - kx - \int \Delta\omega(t)dt]\}, \\ E_2' &= E_2' \exp\{-i[(\omega_1 + \omega_2)t - kx - \int \Delta\omega(t)dt - \Phi]\}. \end{aligned} \quad (2)$$

$$P = C \{1 + \cos[(\omega_1 - \omega_2)t + M_1 \int \dot{x}(t)dt - \Phi]\}.$$

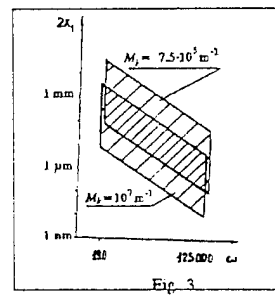
$$U = U_0 \{1 + \cos[(\omega_1 - \omega_2)t + M_1 \int \dot{x}(t)dt + \Phi]\} \quad (3)$$

$$U = U_0 \sum_{n=1}^{\infty} J_n(M_1 x) \cos[(\omega_1 - \omega_2)t + n\omega_1 t + \Phi]. \quad (4)$$



$$\begin{aligned} U_0(t) &= (U_0 \cos \gamma_1) / \Gamma + \sum_{n=1}^{\infty} U_n \cos(n\omega_1 t - \gamma_1), \\ U &= \{U_0 \cos \gamma_1 / \Gamma + \sum_{n=1}^{\infty} U_n \cos(n\omega_1 t - \gamma_1)\} [1 + \cos[(\omega_1 - \omega_2)t + \\ &+ M_1 \int \dot{x}(t)dt + \Phi]]. \end{aligned}$$

$$U = \{U_0 \cos \gamma_1 / \Gamma + \sum_{n=1}^{\infty} U_n \cos(n\omega_1 t - \gamma_1)\} \cos[(\omega_1 - \omega_2)t + M_1 \int \dot{x}(t)dt + \Phi]. \quad (5)$$



11.4 Ventura Publisher Output Set Four & Five

FIGURE 11-10

$$\Phi_{\text{rad}} = \frac{\pi \phi_{\text{ib}} L^2 \Omega}{\eta A_{\text{en}} \epsilon_{\text{ef}} \epsilon_{\text{cf}}}$$

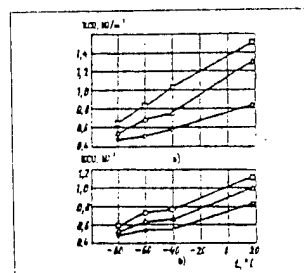
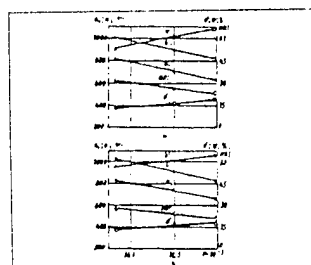
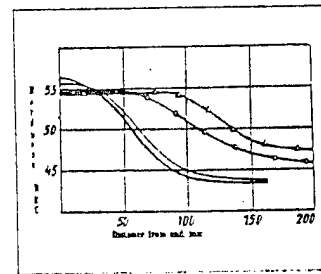
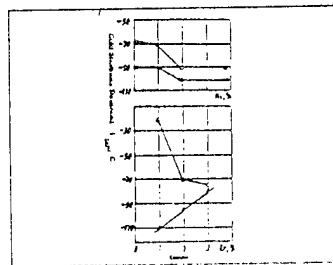
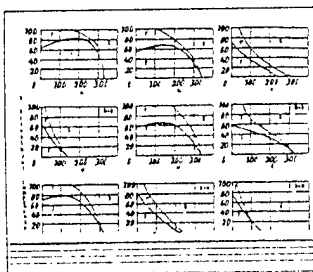
$$\epsilon_{\text{ef}} = \frac{1}{\pi} \left[\int_0^{\pi} \left[\frac{\int_0^{\pi} \epsilon_{\text{ef}}(t) dt}{\int_0^{\pi} \epsilon_{\text{ef}}(t) dt} \right] dt \right]^{1/2} \quad (1)$$

$$Q_{\text{ef}} = \frac{\pi \epsilon_{\text{ef}}}{\epsilon_{\text{cf}}}$$

$$\epsilon_{\text{ef}}(t) = \sum_{i=1}^N \epsilon_{\text{ef}} \text{rect}(t - \tau_i) \quad (2)$$

$$\Delta_{\text{ef}} = \left[\frac{1}{\pi} \left[\frac{\int_0^{\pi} \epsilon_{\text{ef}}(t) dt}{\int_0^{\pi} \epsilon_{\text{ef}}(t) dt} \right] dt \right]^{1/2} \quad (3)$$

FIGURE 11-11



11.5 IslandPaint Output

$$\Delta \Psi_{\max} = \left\{ \left[\left(c_{12}^{(20)} - \omega^2 m_{12}^{(20)} \right) Q_3 - a_{13} \omega^2 R_{\varphi 0 z} \right]^2 + \left[\left(c_{21}^{(20)} - \omega^2 m_{21}^{(20)} \right) Q_3 - a_{23} \omega^2 R_{\varphi 0 z} \right]^2 \right\}^{1/2} (4m\omega C)^{-1},$$

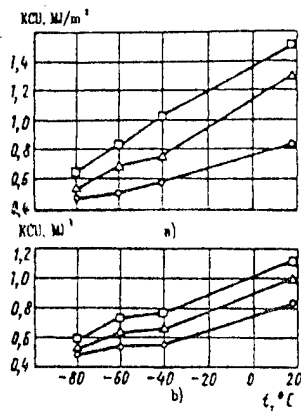
11.6 IslandPaint Output (Continued)

$$\begin{array}{c|c|c|c} \chi & \phi & \psi & \\ \hline \hline -\sin \chi & -\cos \chi & -\frac{\sin \chi}{\cos \phi} & \end{array}$$

$$\begin{array}{c|c|c|c} \cos \chi \cdot \tan \phi & 0 & \frac{\cos \chi}{\cos \phi} & 0 \\ \hline \hline \cos \chi & \sin \chi & 0 & -1 \end{array}$$

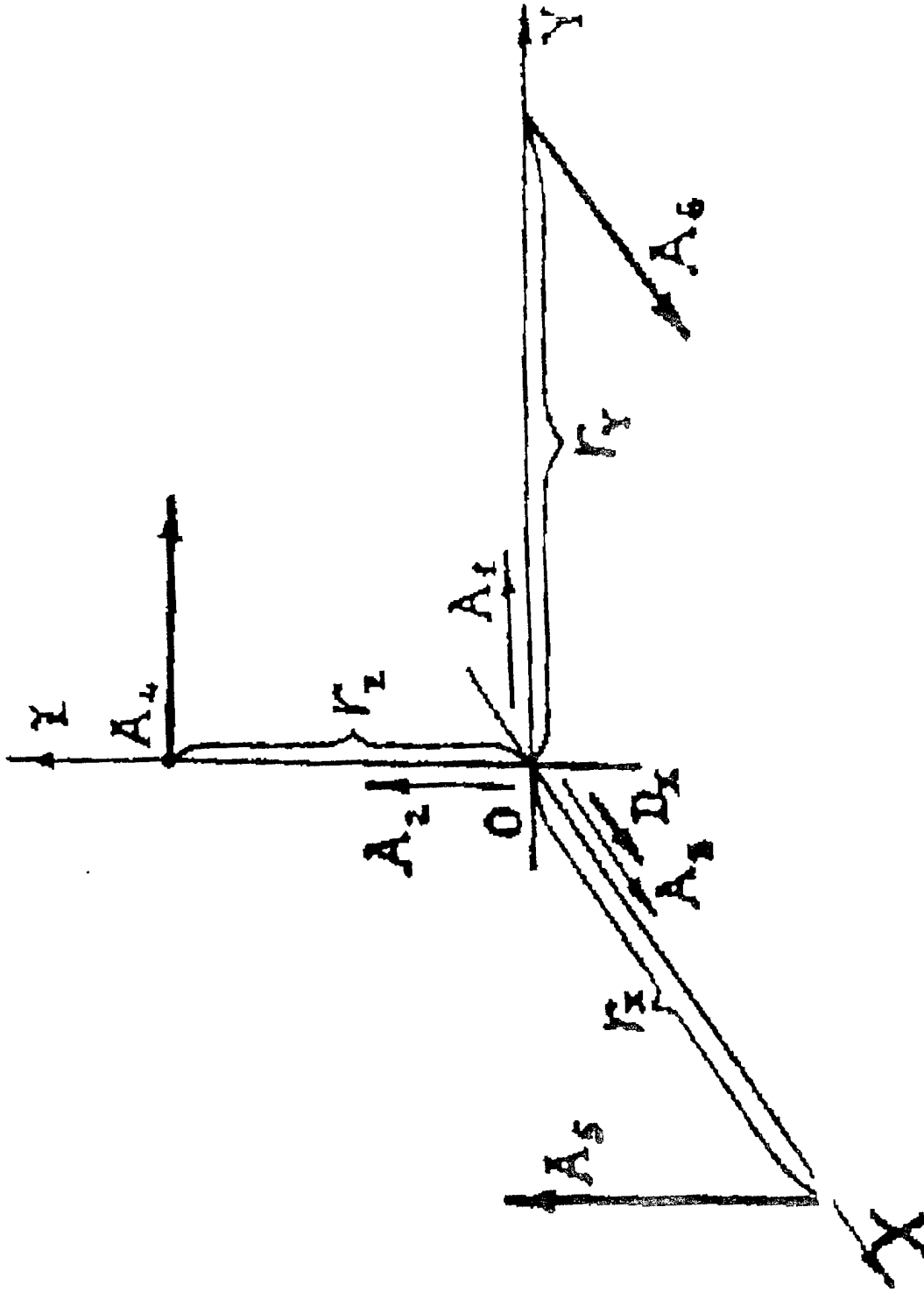
(11)

11.7 IslandPaint Output (Continued)



11.8 Preview Output D001R002

Relative location of axes of sensitivity PINS sensors



11.9 Preview Output D002R003

$$m^{(2k)} \text{ and } C_{ij}^{(2k)} \quad (i, j = 1, 2)$$

11.10 Preview Output D003R010

$$\begin{aligned}
 U_0(t) &= (U_{00} \cos \chi_0) / 2 + \sum_{q=1}^{\infty} U_{0q} \cos(q\omega t + \chi_q), \\
 U &= [(U_{00} \cos \chi_0) / 2 + \sum_{q=1}^{\infty} U_{0q} \cos(q\omega t + \chi_q)] \{1 + \cos[(\omega_2 - \omega_1)t + \\
 &\quad + M_k x_1 \sin \omega t + \Phi]\}.
 \end{aligned}$$

11.11 Preview Output D004R003



11.12 Preview Output D005R001

